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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/674,745
Filing Date: September 30, 2003
Appellant(s): HILTON ET AL.

Kevin S. Lemack
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed April 16, 2007 appealing from the Office action mailed 7-8-2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Application Nos. 10/657,949; 10/306,594 and 10/044,407.

Board's decision NONE.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

NEW GROUND(S) OF REJECTION

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over any one of four Ayambem et al., references i.e., US Patents and PGP Nos. 6645291, 6436185, 2002/038618 or 2003/105204 in combination with US Patent 5,110,362 to Hoarty, et el., (hereinafter "Hoarty").

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6645291	Ayambem, et. al.	11-2002
6436185	Ayambem et al.,	8-2002
2002/038618	Ayambem ey al.,	4-2002
2003/105204	Ayambem et.al.,	5-2003
5110362	Hoarty et al	5-1972

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

Claims 5-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5-10 claim amount of adherence and coherence agent in reference to the amount of another component, namely water, which is NOT a part of the claimed mixture. In fact, the water is *excluded* from the claimed *dry* mixture. The actual amount of water is NOT defined in any of the claims, or for that matter, anywhere in the specification with regard to the claimed dry components. The limitation of claims 5-10 defining the amount of the adherence and coherence agent in reference of undefined amount of water, thus, is indefinite.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-2, 5-10, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over any one of four Ayambem et al., references i.e., US Patents and PGP Nos. 6645291, 6436185, 2002/038618 or 2003/105204.

Since the references are related to each other and have substantially similar disclosures, the references are made to lines and columns of '185 patent.

Each one of the references disclose compositions containing a hydraulic binder, such as calcium carbonate and calcium sulfate hemihydrate (gypsum or stucco), and water soluble polymeric set retarder (column 4, lines 38-42). The reference further expressly discloses addition of polymeric binders, including polyvinyl alcohol, which fully correspond too the claimed foam stabilizer as being the identical chemical compound to the claimed foam stabilizer (as per claim 2). See column 8, last paragraph. While naming PVA a different name, i.e., a binder, this component (which is identical to the

claimed PVA) is inherently capable of some degree of adherence or coherence enhancement as having this property by virtue of being identical chemical compound to the claimed compound, and in the absence of any claimed quantitative characteristic that can be associated with "enhance adherence or coherence" property of the claimed stabilizer.

While the reference discloses water based compositions, the reference expressly discloses that the dry components can be separately preblended. See column 7, lines 45-52 of '185 reference. (further references to specific columns and lines are all made with regard to the '185 patent). Furthermore, in the illustrative examples the drying-type joint compound (which includes, for example, gypsum as per disclosure in column 8, lines 21-26) is first dry blended with a water soluble polymeric set retarder. Addition of binders (dry components as per column 7, lines 45-52, is also within purview of the references. Therefore, dry intermediate compositions containing all the claimed elements (even though, they are disclosed as intermediate compositions0 are clearly within the purview of the reference.)

As far as the claimed properties of the dry compositions being capable of forming as pumpable slurry upon addition of water and the slurry being capable of spray application, first of all, this properties are believed to be inherent in the disclosed compositions as the compositions disclosed in the references are substantially similar to the claimed compositions. Furthermore, the amount of water added to the composition is not specified in the claims. It is further reasonable believed that upon addition of sufficient amount of water to preblended dry intermediate product of Ayambem et al.,

and sufficient pump force, the disclosed compositions based on calcium carbonated (or virtually ANY calcium carbonate composition) are "pumpable" and can be spray applied at least to some extent.

Limitations of newly added claims 5-10 are inherently met by the Ayambem references since, as discussed above, the limitations recited in these claims are indefinite and would be met by ANY composition having any amount of adherence and coherence agent given that virtually any amount of water cam be added to the composition to provide the composition with the property of pumpable slurry.

The reference expressly discloses calcium carbonate as one of the components of the mixture, and other various additives. It is the examiners position that addition of fibrous filers is well known in the art as reinforcement fillers and thus, would have been clearly obvious for an ordinary artisan for applications where reinforced final product is desired. Similarly, addition of known \alpha-olefin sulfonates as well known components would have been obvious as one of a known additive for their known function.

Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayambem in combination with applicants own admission on the record.

The Ayambem references while teaching that polyvinyl alcohols (PVA) are suitable component of the disclosed compositions, do not specifically disclose size of the of the suitable PVA powderes, thus implying that any commercially available PVA are suitable for the invention absent showing of unexpected results that can be clearly attributed to the claimed powder size. Applicants admit on the record that the claimed

powder size PVA are readily available on the market, and, furthermore state that "Those skilled in the art can readily determine which commercially available polyvinyl alcohol powders in addition to the foregoing are suitable", (see page 8 of the instant disclosure), thus clearly implying that the claimed PVA powders are well known and choosing it would have been obvious for an ordinary artisan with reasonable expectation of adequate results.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ayambem in combination with US Patent 5,374,448 to von Bonin (hereinafter Von Bonin).

The Ayambem references appears to disclose stucco (calcium sulfate dehydrate) as one of the possible drying-type binders, however, argendo, if the reference does not disclose the claimed stucco component, functional equivalence of various drying-type or hydraulic binders such as expressly disclosed gypsum (or stucco) or limestone, Portland cement is well known in the art and use of one in place of the other would have obvious with reasonable expectation of adequate results. This position is further supported by, for example, disclosure of van Bonin, column 2, lines 30-66. Thus, the limitations of claim 11 would have been obvious from the teachings of the above cited references.

NEW GROUND(S) OF REJECTION

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over any one of four Ayambem et al., references i.e., US Patents and PGP Nos. 6645291, 6436185,

2002/038618 or 2003/105204 in combination with US Patent 5,110,362 to Hoarty, et el., (hereinafter "Hoarty").

The disclosure of the primary references, i.e., Ayamben et al., references are discussed in detail above. While the references do not expressly disclose addition of an alpha-olefin sulfonate to the cementitious compositions based on limestone (calcium carbonate) of the disclosed invention, addition of those compounds, which are notoriously known air entrainment agents for cement compositions based on lime, as evident , for example, form disclosure of Hoarty, column 2, lines 5-16. Thus, addition of a known compound for its known function as an air entrainment agent for cement compositions to the cement compositions disclosed in any of the Ayabmem reference would have been clearly obvious for an ordinary artisan to realize the functional effect of the air entrainment agent.

(10) Response to Argument

The applicants argue that claims 5-10 are not indefinite since effective amount of the adherence and coherence agent is added to the dry mixture based upon the knowledge that water will eventually be added to create the slurry. That the water does not form part of the claimed dry mixture does not render indefinite the amount of the agent, since those skilled in the art can readily determine the amount of water necessary to form the slurry. That is, the amount of the agent is based upon a predetermined amount of water to be added to the dry mixture at a later point. This

argument, first of all, is based on the premises that the claimed dry composition will necessarily be used for the end use intended by applicants and in accordance with the formulations exemplified in the specification. This is fundamentally wrong assumption because the claimed dry mixtures, while have to be suitable for use in the applicants intended uses upon addition of water, do not have to be used as such, as for example, evident by Ayambem references, and may be used for variety of different end uses requiring addition of water or not, and if so in wide variety of amounts that may not be known upon formulating of dry mixture, since the manufacturer of the dry mixture may not know all of the final uses of the dry mixture. The bottom line is that the amount of a components of the claimed dry mixture is defined with respect to the amount of a component, i.e., water, that is not a part of the claim.

With respect to the rejection of claims as obvious over any of the Ayambem references the applicants argue that since the Ayambem et al. references disclose a joint compound for us filling and coating joints between adjacent gypsum wallboard, the joint compound necessarily includes water, and other compounds such calcium carbonate, optionally calcium sulfate hemihydrate, and water-soluble set retarder. The applicants argue that the compositions disclose by the reference are necessarily "wet" (as necessarily containing water). This argument is not persuasive since the references clearly state that the dry components of the water based mixture may be pre-blended. See column 7, lines 45-52 of '185 reference. (further references to specific columns and lines are all made with regard to the '185 patent as done by the applicants in the Brief). Furthermore, in the illustrative examples the drying-type joint compound (which

includes, for example, gypsum as per disclosure in column 8, lines 21-26) is first dry blended with a water soluble polymeric set retarder. Addition of binders (dry components as per column 7, lines 45-52, is also within purview of the references. Therefore, dry compositions containing all the claimed elements (even though, they are disclosed as intermediate compositions) are clearly within the purview of the reference. Furthermore, it has been long established by the law, *In re Gibson*, 39 F.2d 975, 5 USPQ 230 (CCPA 1930), that selection of any order of mixing ingredients is *prima facie* obvious. Thus, intermediate product containing only dry components as added to the mixture prior to addition of water, are also prima facie obvious from the disclosure of the reference.

The applicants further argue that there is no indication in the references that the joint compound is pumpable upon the addition of water, or that upon the application of mechanical turbulence, the composition form a settable foam capable of spray application, as required by the instant claims. First of all, none of the claims require the compound to form such a settable foam upon application of mechanical turbulence. (Such claims are presented in related patent application 10/657,494, but not in the instant application). The instant application does require the composition to be pumpable and capable of spray application upon addition of water. The argument that the reference does not disclose this property of the compositions is not persuasivs because it is directed to the properties of the compositions which the compositions will exhibit upon addition of unspecified amount of water. First of all, simply because the reference is silent as to some properties of the composition, does not mean that those

properties are not inherently exhibited by the disclosed compositions, and, since the compositions disclosed in the cited references are substantially the same as the claimed compositions, it is reasonable believed that they inherently exhibit such properties. Furthermore, as discussed above, the properties are defined with respect of unspecified amounts of added water. In this respect, virtually any calcium carbonate based composition forms a "pumpable slurry" and is capable of being spray applied upon addition of large amounts of water and sufficient pump pressure. Once again, the claimed properties are recited with respect to the compositions that have unspecified amount of water added to it, thus method of applications of the compositions disclosed in the references is irrelevant, since a lot more water could be added, if needed, to achieve the desired pumpable slurry.

The applicants further argue that "the instant claims require that the foam stabilizing agent is present in the dry mixture in an amount effective for stabilizing the foam." (See paragraph bridging pages 6 and 7 of the Brief). **None** of the claims of the instant application requires any foam stabilizer or foam stabilization. Again, it appears that the applicants argue limitations of a related application, not the instant claims. Thus, the arguments are irrelevant.

The applicants further argue that claims 5-10 are separately patentable over the disclosure of the cited references since those claims additionally recite the "effective amounts" of adherence or coherence agent. These amounts are from about 1% to 12 % based on the mass of water added the dry mixture to form the pumpable slurry (claims

5-7) and from 2 to 3 % by mass of water added the dry mixture to form the pumpable slurry (claims 8-10).

The preferred adherence and coherence agent disclose and claims by the applicants is polyvinyl alcohol . The applicants agree that (PVA) is disclosed as a binder, but argue that the polyvinyl alcohol binder of Ayambem et al., is used in an amount of about 0.1 wt% about 0.4 wt % based on the total weight of joint compound.

First of all, as discussed above, the claimed amounts are indefinite since they are claimed in respect to the unspecified amounts of added water. Second of all, even though, the disclosed amounts of PVA do not exceed 0.4 % of the *compositions,* in view of the same compositions having as low as 20 % of water, the relative amount of PVA and water disclosed by the reference fully correspond to the claimed amounts. Note, as discussed above, any calcium carbonate based composition (even containing only 20 % of water) can be made "pumpable" depending on the applied pump force.

The applicants further state that claims 3 and 4 would not have been obvious by the virtue of depending on allegedly unobvious claim 1. Since the examiner, as per discussions above, is of the position that claim would have been obvious, this argument is moot and/or answered above in discussion of the independent claim. With regard of the applicants argument that the determination by those skilled the art referred by Applicant is only after the skilled artisan has read and understood the teachings of the instant specification are equally applicable to the disclosures of the cited references. Once the disclosures of the Ayambem references are understood, it is within the skills

of an ordinary artisan to determine which specific grades of PVA are sutable in the absence of showing of unexpected results.

The applicants further argue that claim 11 would not have been obvious by the virtue of depending on allegedly unobvious claim 1. Since the examiner, as per discussions above, is of the position that claim would have been obvious, this argument is moot and/or answered above in discussion of the independent claim.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(9)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of

rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

Irina S. Zemel

A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

Gregory Mills

GREGORY MILLS
QUALITY ASSURANCE SPECIALIST

Conferees:

James J. Seidleck

David Wu